Workgroup and Workflow Management Systems-Written Test of Jan. 25th, 2010

Family name ⎯⎯⎯⎯⎯⎯⎯ First name ⎯⎯⎯⎯⎯⎯⎯ Politecnico ID # ⎯⎯⎯⎯

Master Course in ⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯⎯
Please, fill in this sheet carefully. All answers must be provided on this sheet, which must be returned at the end of the test. No additional sheet will be considered[1].

Rules. The examination is passed if the student obtains at least 13 points out of a total of 25 points available for this test, and the grand total of obtained points, including those obtained with a presentation or a project, is greater than or equal to 18. Use of books, handbooks, lecture notes is not permitted: only the sheets provided by the teacher can be used. All the questions must be answered, at least partially: tests in which even one question has not been answered will not be evaluated. Duration of the test: 2 hours.

Exercises

(1) Provide an example of a typical process manageable by a **Workgroup System** and of a typical process manageable by **Workflow Management System**. Highlight the main differences between the two processes.

space reserved to your answer

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[1]**Remark**. Complete specifications whenever needed. Clarity and order will be taken into account for the evaluation.

(2) The *Adler* hotel decides to make its booking system available to on-line users. In the Web site, customers can easily check available rooms, book and pay. In order to book a room the customer has firstly to register into the system, typing his/her email address: the new customer has to provide all the personal data (name, surname, address, SSN, phone number, preferences, a nickname and a password). In order to avoid illegal registrations, the front desk of the hotel calls the customer to provide him/her with an activation number to be used the first time the customer logs in, only: this activates the customer's account.

After having activated the account, the customer logs in, selects the dates (arrival and departure) and the type of room required: the system lists all the available rooms with a short description, ranking them according to the customer's preferences. After booking a room, the customer receives the reservation number and proceeds with the payment of the first night, to be received by the hotel within the next 48 hours either by credit card or by bank transfer. The front desk confirms the reservation and proposes the specials of the week, by sending an e-mail to the customer.

If the customer changes his/her mind, he/she may cancel the reservation up to two days before the arrival date with no penalty fee: any further cancellation implies a one night charge. Eventually, the returned amount is sent back to the customer either by a bank transfer or by credit card.

After the customer checks in the hotel, the front desk verifies the customer's data. If the customer is a "frequent guest" of the hotel and all the previous payments from that customer are regular, he/she receives a 15% discount on the beverages purchased at the hotel every day after 10:00 p.m. When the customer checks out, the final bill - including the discount - is printed out and the cashier registers the payment.

Provide a reasonable schema of the outlined process(es), according to one of the following modeling formalisms: WIDE model, Workflow Management Coalition model. Please, suitably model all the *pre-conditions* and *post-conditions* of every task.

(3) With respect to the process described in Exercise 2, provide a reasonable example of an exception monitoring the cancelling of the reservation by the customer.

space reserved to your answer - exercise 3

space reserved to your answer - exercise 2

space reserved to your answer - exercise 2

(4) Describe in detail the concept of *event node* when trying to map *expected* exceptions on top of a commercial WfMS.

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This part for use by the teacher, only.

Ex. 1	Ex. 2	Ex. 3	Ex. 4	**Total**